

a driving mechanism including means for interchangeably coupling said driving mechanism to said osteotome tool, said driving mechanism including a piezoelectric transducer element imparting a vibrational motion to said osteotome tool; and
a power source for delivering electrical power to said driving mechanism.

132. (New) The dental instrument of claim 131, wherein said osteotome tool gradually tapers outwardly.

133. (New) The dental instrument of claim 131, wherein said osteotome tool has a transverse dimension along its length that generally corresponds to a diameter of said dental implant.

134. (New) A method for installing a dental implant into a bore in a living bone, said method comprising the steps of:

providing an osteotome tool having a central axis, a generally circular cross-section, a lower end, an upper end, and an engaging surface between said lower and upper ends;
providing a driving mechanism including a piezoelectric transducer element capable of producing vibrational motion;
coupling said driving mechanism to said osteotome tool;
powering said driving mechanism to actuate said piezoelectric transducer element;
engaging said living bone with said osteotome tool to develop said bore, said bore having a generally circular cross-section; and
screwing said dental implant into said bore.

135. (New) The method of claim 134, wherein said engaging surface has a sequence of regions from said lower end to said upper end that increase in cross-sectional area.

136. (New) The method of claim 134, wherein said tool has regions of a constant diameter.

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137. (New) A dental instrument for developing a bore that is defined by bone tissue with increased density, said device comprising:

a compaction tool having a central axis, a lower end, and upper end, and a bone engaging surface for displacing bone tissue that is initially in the area defined by said bore primarily in the radial direction with respect to said central axis, said compaction tool having a generally circular cross section for producing a known dimension in said bore for receiving a dental implant; and

a driving mechanism including means for coupling said driving mechanism to said tool, said driving mechanism further including means for vibrationally moving said tool while in said bore.

138. (New) The dental instrument vice of claim 137, wherein said compaction tool is tapered from said upper end to said lower end.

139. (New) A dental instrument for developing a bore in living bone for receiving a dental implant, comprising:

a tool having a central axis, a lower end, and an upper end, said tool having a bone engaging surface above said lower end for displacing bone tissue primarily in the radial direction with respect to said central axis, said tool having a generally circular cross-section with a transverse dimension that